

means for transmitting a communication at an initial data rate using at least one channel;

means for monitoring said communication and determining an adjusted data rate desired for continued support of said communication;

means for allocating a sufficient number of channels for the communication based on the adjusted data rate such that the sum of the data rates of the allocated channels is at least equal to the selected data rate and is not greater than the adjusted data rate plus a predetermined rate; and

means for continuing the transmission of said communication within said allocated channels whereby said station dynamically adds or tears down channels for said communication by changing the number of allocated channels during said communication.

3/ 5. A wireless digital code division multiple access (CDMA) system as in claim 2/ wherein said establishing means establishes D channels at a first data rate and B channels at a second data rate which is greater than said first data rate.

4/ 6. A wireless digital code division multiple access (CDMA) system as in claim 3/ wherein said first data rate is 16 kb/s and said second data rate is 64 kb/s.

5/ 7. A wireless digital code division multiple access (CDMA) system as in claim 4/ wherein the communication is an ISDN communication and said allocating means allocates a single D

channel and a sufficient number of B channels for continued  
5 transmission of the communication from said station and said  
predetermined rate is equal to said second data rate.

~~6~~ 8. A wireless digital code division multiple access (CDMA)  
system as in claim ~~3~~ wherein the communication is an ISDN  
communication and said allocating means allocates a single D  
channel and a sufficient number of B channels for continued  
5 transmission of the communication from said station and said  
predetermined rate is equal to said second data rate.

*Ant.*  
~~7~~ 9. A wireless digital code division multiple access (CDMA)  
system as in claim ~~2~~ wherein a set of assigned channel codes are  
assigned for the communication and the allocating means allocates  
channels having codes within said assigned set.

~~8~~ 10. A wireless digital code division multiple access (CDMA)  
system as in claim ~~4~~ further comprising:

at least a second communication station including:

means for receiving from said first station the  
5 communication within said allocated channels.

~~9~~ 11. A wireless digital code division multiple access (CDMA)  
as in claim ~~10~~ wherein:

said second communication station further includes:

means for establishing return communication channels of  
5 different data transmission rates;

means for monitoring a return communication and determining a desired return data rate;

10 means for allocating a sufficient number of channels for the return communication based on desired the return data rate such that the total data rate of the allocated return channels is at least equal to the desired return data rate and is not greater than the desired return data rate plus a predetermined rate; and

15 means for transmitting the return communication within said allocated return channels; and

said first communication station includes means for receiving the return communication within said allocated return channels.

*Cont.*  
~~10/~~ 12. A wireless digital code division multiple access (CDMA) system as in claim ~~9~~ wherein each said establishing means establishes D channels at a first data rate and B channels at a second data rate which is greater than said first data rate.

~~11/~~ 13. A wireless digital code division multiple access (CDMA) system as in claim ~~12~~ wherein said first data rate is 16 kb/s and said second data rate is 64 kb/s.

~~12/~~ 14. A wireless digital code division multiple access (CDMA) system as in claim ~~10~~ wherein the communication and return communication are an ISDN communication; each said allocating means allocates a single D channel and a sufficient number of B channels;  
5 and said predetermined rates are equal to said second data rate.

~~12~~ 15. A wireless digital code division multiple access (CDMA) as in claim ~~8~~ 10 wherein said first communication station is a base station which further comprises:

a physical layer generating CDMA codes, synchronizing between  
5 said base station and subscriber units, providing bearers, spreading and transmitting bits on a CDMA code, measuring received signal strength to permit automatic power control, and generating transmission of pilot signals;

*Ant.*  
10 a medium access control (MAC) layer encoding and decoding for forward error correcting, assigning CDMA codes, encrypting and decrypting communication signals, encrypting and error-correcting to the bearers provided by the physical layer, framing, error checking and discriminating medium access control peer to peer messages and data, linking control frames, and processing automatic  
15 control information; and



a data link control layer providing an error-free link among the layers, wherein the data link control layer initiates changes in the allocation of channels based on determining the minimum desired data rate for communications channels via physical layer.

~~14~~ 16. A wireless digital code division multiple access (CDMA) communication system as in claim ~~13~~ 15 wherein said second communication station is a subscriber unit which further comprises:

a physical layer generating CDMA codes; synchronizing between  
5 said base station and said subscriber unit; providing bearers; spreading and transmitting bits on a CDMA code; measuring received signal strength to permit automatic power control; and generating transmission of pilot signals;

a MAC layer encoding and decoding for forward error  
10 correcting; assigning CDMA codes; encrypting and decrypting  
communication signals; encrypting and error-correcting to the  
bearers provided by the physical layer; framing; error checking and  
discriminating medium access control, peer to peer messages and  
data; linking control frames; and processing automatic control  
15 information; and

a data link control layer providing an error-free link among  
the layers, wherein the data link control layer initiates changes  
in the allocation of channels based on determining the minimum  
desired data rate for communications channels via physical layer.

  15. A method for allocating bandwidth and dynamically  
switching between different bandwidths in a communication station  
of a code division multiple access (CDMA) system based upon the  
data communication rates required by a user comprising:

- 5 a) transmitting a communication at an initial data rate  
using at least one channel;
- b) monitoring said communication and determining an adjusted  
data rate desired for continued support of said communication;
- c) allocating a sufficient number of channels for the  
10 communication based on the adjusted data rate such that the total  
data rate of the allocated channels is at least equal to the  
adjusted data rate and is not greater than the adjusted data rate  
plus a predetermined rate; and
- d) continuing transmission of said communication within said  
15 allocated channels whereby said communication station dynamically